

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Yukio KITAIKE et al.

Application No.: 10/541,729

: Group Art Unit: 1794

Filed: July 11, 2005

: EXAMINER: D. S. Nakarani

FOR: Multilayer structure polymer and resin composition as well as acrylic resin film material, acrylic resin laminate film, photocurable acrylic resin film or sheet, laminate film or sheet and laminate molding obtained by lamination thereof

DECLARATION UNDER 37 CFR 1.132

I, Yoshinori ABE, hereby declare and state that:

I am a citizen of Japan, residing at 3-4-2, Kurokawa, Otake-shi, Hiroshima-Ken, 739-0653, JAPAN.

2. I work in the section of Mitsubishi Rayon Co., Ltd., in which research and development related to the present invention were performed. I am fully familiar with the subject matter of the present application as well as the references relied upon by the Examiner in the prosecution of this application.

3. I obtained a Master degree from Osaka University, Graduate school of Engineering Science, Synthetic Chemistry, in March 2001, where I studied Synthetic Polymer Chemistry.

4. I am currently employed by Mitsubishi Rayon Co., Ltd., and began working for Mitsubishi Rayon Co., Ltd., in April 2001, where I have engaged in research and development relating to Acrylic Resin Film.

5. I have conducted the comparative tests described below.

Comparative Tests

Comparative Test 1

An acrylic resin film material (A-1) was formed as described in Example 1 of the present specification, except for using only the thermoplastic polymer (II-3) [MMA/n-BA copolymer (MMA/n-BA = 77/23 (by weight))], which is described in the present specification. Tensile test of the acrylic resin film material (A-1) obtained was conducted under Condition "a" as described in the present specification.

Comparative Test 2

An acrylic resin film material (A-2) was formed as described in Comparative Example 3 of the present specification, except that the amounts of the multilayer structure polymer (I-5) used and the thermoplastic polymer (II-1) used were respectively 40 parts and 60 parts. Tensile test of the acrylic resin film material (A-2) obtained was conducted under Condition "a" as described in the present specification. Haze values of the acrylic resin film material (A-2) before and after the above tensile test as well as a difference therebetween were also measured as described in the present specification.

Comparative Test 3

An acrylic resin film material (A-3) was formed as described in Comparative Example 1 of the present specification. A flexural modulus of the acrylic resin film material (A-3) obtained was measured according to JIS K 7171.

Comparative Test 4

An acrylic resin film material (A-4) was formed as described in Example 1 of the present specification, using only an acrylic resin, "ACRYPET IRH70" (trade name, Mitsubishi Rayon Co. Ltd.). A flexural modulus of the acrylic resin film material (A-4) obtained was measured according to JIS K 7171. A pencil hardness of the acrylic resin film material (A-4) obtained was also measured as described in the present specification.

Results

Comparative Test 1

The acrylic resin film material (A-1) has fractured during the tensile test and the tensile test could not be carried out until the end-point.

Comparative Test 2

The haze values of the acrylic resin film material (A-2) before and after the tensile test were respectively 2.7% and 43.9%. The difference therebetween was 41.2%.

Comparative Test 3

The flexural modulus of the acrylic resin film material (A-3) was 1370 MPa.

Comparative Test 4

The flexural modulus of the acrylic resin film material (A-4) was 1500 MPa and the pencil hardness of the acrylic resin film material (A-4) was 4B.

6. I understand fully the content of this application.

7. I, Yoshinori ABE, the undersigned declarant declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 2009, 12, 21

Yoshinori Abe
Yoshinori ABE